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Paper No. 21

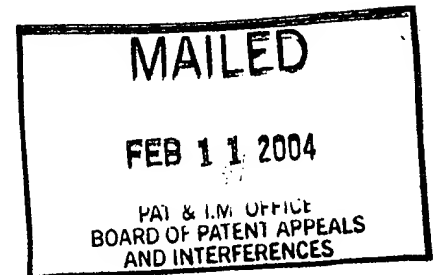
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS R. MORELAND and KURT M. TAUSCHER

Appeal No. 2003-0229
Application No. 09/768,885

ON BRIEF



Before HAIRSTON, DELMENDO, and JEFFREY T. SMITH, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 (2003) from the examiner's final rejection of claims 13 through 23 and 29-32 in the above-identified application (final Office action mailed Sep. 7, 2001, paper 6). Claims 1 through 12 and 24 through 28, which are the only other pending claims, have

been withdrawn pursuant to 37 CFR § 1.142(b) (2003) (effective Dec. 22, 1959).¹

The subject matter on appeal relates to a method of making an aircraft deicer panel. Further details of this appealed subject matter are recited in representative claims 16, 23, and 31 reproduced below:

16. A method of making an aircraft deicer panel, comprising the steps of:

providing an inner support layer which is electrically insulating, an outer cover layer which is thermally conducting, and a heater layer which is electrically insulating;

stitching an electrically conductive strand in the heater layer in a heat-dissipating pattern;

joining the inner support layer, the heater layer, and the cover layer together; and

securing a bondside surface of the inner support layer to a surface of an aircraft.

23. A method as set forth in claim 16, wherein said stitching step comprises programming a sewing machine to automatically stitch the heat dissipating pattern.

31. A method as set forth in claim 16, wherein said securing step comprises securing the bondside surface of the inner support layer to a wing of the aircraft.

¹ In reply to the final Office action, the appellants submitted two separate amendments pursuant to 37 CFR § 1.116 (2003) (effective Feb. 5, 2001). These two amendments were filed on Nov. 7, 2001 (paper 7) and Mar. 4, 2002 (attachment to appeal brief, paper 11), respectively. The examiner indicated that the Nov. 7, 2001 amendment has not been entered (advisory action mailed Nov. 29, 2001, paper 8), while the Mar. 4, 2002 amendment has been entered (examiner's answer mailed May 20, 2002, paper 12, p. 2).

The examiner relies on the following prior art references as evidence of unpatentability:

Bloomer	1,142,393	Jun. 8, 1915
Jones	2,599,059	Jun. 3, 1952
Pffenninger, Jr. (Pffenninger)	2,643,320	Jun. 23, 1953
Kitamura (JP '268) (published JP application)	2000-10628A	Apr. 11, 2000

The claims on appeal stand rejected under 35 U.S.C.

§ 103(a) (2003) as follows:

- A. claims 13, 14, and 16 through 22 as unpatentable over Pffenninger in view of Bloomer (answer, page 3; final Office action, page 2);
- B. claims 15 and 23 as unpatentable over Pffenninger in view of Bloomer and JP '268 (answer, page 3; final Office action, pages 2-3); and
- C. claims 29 through 32 as unpatentable over Pffenninger in view of Bloomer and Jones (answer, page 3; final Office action, page 3).

We affirm rejections A and C but reverse rejection B.²

² The appellants submit: "For the purposes of this appeal only, the claims stand or fall with each other, issue by issue." (Appeal brief, p. 7.) We therefore confine our discussion of issue A to representative claim 16 and issue C to representative claim 31. 37 CFR § 1.192(c)(7)(2003) (effective Apr. 21, 1995).

Issue A

To aid us in determining whether the examiner applied the prior art correctly against the appealed claims, we must first consider the scope and meaning of certain terms that appear in representative claim 16. Gechter v. Davidson, 116 F.3d 1454, 1457, 1460 n.3, 43 USPQ2d 1030, 1032, 1035 n.3 (Fed. Cir. 1997); In re Paulsen, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). It is well settled that, in proceedings before the United States Patent and Trademark Office (PTO), claims in an application are to be given their broadest reasonable interpretation, taking into account the written description found in the specification. In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow."); In re Yamamoto, 740 F.2d 1569, 1571, 222 USPQ 934, 936 (Fed. Cir. 1984) ("The PTO broadly interprets claims during examination of a patent application since the applicant may 'amend his claim to obtain protection commensurate with his actual contribution to the art.'") (quoting In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969)).

Appealed claim 16 recites the step of "stitching an electrically conductive strand in the heater layer in a heat-dissipating pattern." Because the present specification does not contain any special definition for the term "stitching," we give the term its broadest reasonable meaning as it would be interpreted by one skilled in the relevant art. In this regard, Webster's Third New International Dictionary 2246, copy attached, defines the root term "stitch" to include "a method of fastening leaves (as of pamphlets) with thread or cord drawn by hand or machine through previously pierced holes or with wire staples..." and "to fasten together (signatures) by passing thread or wire through all the signatures at once - distinguished from sew." From these definitions, we determine that one of ordinary skill in the art would have understood the term "stitching" to include lacing.

The appellants do not dispute the examiner's finding (final Office action, page 2) that Pfenninger discloses the first, third, and fourth recited steps of appealed claim 16. Specifically, Pfenninger describes a method for making heating elements (e.g., an aircraft deicer) comprising:

providing a base member 12 and two outer sheaths comprising a layer of woven glass 19 and an outer covering layer of fiber

glass cloth coated with silicone rubber 20 (Figures 1-3;
column 2, lines 27-39; column 3, line 17 to column 4, line 18);

lacing or winding resistance wire 13 through drilled
openings 16 in the base member 12 (column 3, lines 9-12);

joining the base member or card 12 and the two outer
sheaths (column 3, line 17 to column 4, line 18); and

securing the deicer to a surface of an airplane (column 1,
lines 36-39). According to Pfenninger (column 1, lines 9-29;
column 3, lines 27-31; column 3, lines 51-73), the outer sheaths
as well as the base member 12 are electrically and thermally
insulating.

Like Pfenninger, Bloomer describes electric heating pads.
(Page 1, lines 10-16.) In particular, Bloomer describes a
method for making a heating pad in which the metallic conductor
strand is stitched to a flexible, non-conductive body sheet.
(Page 1, lines 10-32.) According to Bloomer (page 1, lines 32-
37 and 90-107), the stitching method allows the conductor to be
attached to the body quickly "with a maximum amount of surface
or length of conductor in proportion to a minimum space." (Page
1, lines 32-37.) In particular, Bloomer teaches the following
desirable benefits:

[B]y employing the strand as a sewing element, it is
obvious that the pad can be cheaply manufactured with
great speed and when completed, its utility and

lasting qualities are proportionately greater, due to the fact that in stitching the strand a greater number of feet of resistance conductor in a given length is obtained than in such heating-pads wherein the conductor is laid thereon and secured in any ordinary manner.

Given these teachings, we share the examiner's view (final Office action, page 2) that a person having ordinary skill in the art would have been led to combine the teachings of Pfenninger and Bloomer. That is, one of ordinary skill would have found it prima facie obvious to stitch Pfenninger's resistance wire 13 onto the base member 12 with a reasonable expectation of obtaining all of the advantages described in Bloomer.

Moreover, as we pointed out above, Pfenninger describes lacing (i.e., stitching) the resistance wire 13 onto the base member 12. (Column 3, lines 9-12.) Thus, Pfenninger describes each and every limitation of appealed claim 16. Although the examiner's rejection of appealed claim 16 has been made under 35 U.S.C. § 103(a), a prior art disclosure that anticipates under 35 U.S.C. § 102 also renders the claim obvious, for anticipation is the epitome of obviousness. In re Baxter Travenol Laboratories, 952 F.2d 388, 391, 21 USPQ2d 1281, 1284-85 (Fed. Cir. 1991); In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569,

571 (CCPA 1982); In re May, 574 F.2d 1082, 1089, 197 USPQ 601, 607 (CCPA 1978).

Relying on Pfenninger's Figure 2 and Bloomer's Figure 1, the appellants contend: "[I]t is the non-stitched pattern which appears to 'facilitate the use of larger quantity of heating wire per unit area.'" (Appeal brief, page 8.) This argument is unpersuasive. The issue here is "not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference" but rather "what the combined teachings of the references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

Here, neither of the two prior art drawings is prepared "to scale." 37 CFR § 1.84 (2003) (effective Nov. 29, 2000). Moreover, it would not be surprising that Pfenninger's resistance wires could be denser than those of Bloomer because Pfenninger, like Bloomer, teaches "stitching" the resistance wire 13. Also, we agree with the examiner's scientific reasoning (answer, page 5) that "[s]titching a heater pattern involves not only configuring the heater wire in the plane of the underlying substrate, but also transverse to the plane of the underlying substrate," as illustrated in Bloomer's Figure 2. While the appellants argue that "[h]eating spaces vertically

below the breezeside surface of the heater layer does little to forward this objective and, in fact, [] robs the deicing system of heating energy for melting ice," no objective evidence (e.g., experimental evidence) has been offered to support such an argument. It is well settled that mere lawyer's arguments and conclusory statements, which are unsupported by factual evidence, are entitled to little probative value. In re Geisler, 116 F.3d 1465, 1470, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984); In re Wood, 582 F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978); In re Lindner, 457 F.2d 506, 508-09, 173 USPQ 356, 358 (CCPA 1972).

Issue B

The examiner admits that neither Pfenninger nor Bloomer teaches "programming the sewing machine to automatically stitch the heat dissipating pattern," as recited in appealed claims 15 and 23. (Final Office action, page 2.) To account for this difference, the examiner relies on JP '268.

The examiner is correct in pointing out (final Office action, pages 2-3) that JP '268 teaches the use of an automatic sewing machine. But as pointed out by the appellants (appeal brief, page 10), JP '268 does not describe "programming" a sewing machine. Accordingly, we cannot uphold the examiner's

rejection. Cf. In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) ("The factual inquiry whether to combine references must be thorough and searching.'...It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with.")

Issue C

Because the appellants rely on the same arguments for appealed claims 29 through 32 as they do for appealed claim 16 (appeal brief, page 10), we affirm the rejection of these appealed claims for the same reasons as stated in Issue A above.³

Summary of Decision

In summary, we affirm the examiner's rejections under 35 U.S.C. § 103(a) of: (a) claims 13, 14, and 16 through 22 as unpatentable over Pfenninger in view of Bloomer; and (b) claims 29 through 32 as unpatentable over Pfenninger in view of Bloomer and Jones. We reverse, however, the 35 U.S.C. § 103(a) rejection of (c) claims 15 and 23 as unpatentable over Pfenninger in view of Bloomer and JP '268.

The decision of the examiner is therefore affirmed in part.

³ The appellants' only comment on this rejection is as follows: [W]hatever Jones teaching [sic] may be regarding cement, this reference does nothing to cure the shortcomings of the proposed Pfenninger/Bloomer combination." (Appeal brief, p. 10; reply brief filed Jul. 29, 2002, paper 15, p. 1.) We note,

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sto abbr 1 stainless 2 station
stod abbr stained
sto abbr 1 stoker 2 story
STO abbr sea transport officer
stoa \ˈstoʊə/ n, pl stoas -ə, -s or stoas [Gk; akin to Gk
stylos pilaster — more at STER] : an ancient Greek portico that
is usu. long and walled at the back with a front colonnade
opening on a public place and designed to afford a sheltered
promenade or meeting place
stoach \ˈstɔːtʃ/ vb -ED/-ING/-ES [origin unknown] dial Eng
: TRAMPLE
stoat \ˈstoʊ, -uʊ -də+V/ n, pl stoats also stoat [ME *stoat*,
from *stene* *la*; *bradly* : any of various weasels that have a
black-tipped tail — used esp. of the animal when it has a
summer coat
stoat-ting also sto-ting \ˈstɔɪ-ŋ/ n, s [origin unknown]
: invisible stitching used esp. by tailors for joining two edges
of fabric
stob \ˈstɒb/ n -s [ME, stik, stump; akin to ME *stubb*, *stubs*
stubb — more at STUB] 1 chiefly dial : STAKE, POST 2 chiefly
dial : STUMP; esp : the stump of a small tree or a shrub
stob \ˈstɔːb/ dial var of STAR
stoc-ca-do \ˈstɔːk-ə-ˈdoʊ/ or stoc-ca-la \-lə-ˈdoʊ/ n, s [OI]
from *stoc*, fr. *stocco* *sc*, a thrust or stab, and *-ada*, *-ala* — more at
STOCK] : a thrust or stab
sto-chaas-tic \ˈstɔːk-ə-ˈstɪk/ adj [from *stochastikos* skillful in
aiming, proceeding by guesswork, *stoch* (in *stochastikos* skillful in
the verbal of *stochazesthai* to aim at, guess at, fr. *stochos* target,
aim, guess) + *-ikos* -ic — more at STING] : RANDOM (cf. *stochas-*
esses) (varies)
sto-chas-tic-al-ly \ˈstɔːk-ə-ˈstɪk-ə-ˈli/ adv : in a stochastic manner
stock \ˈstɒk/ n -s [ME *stock*, fr. OE *stoc*; akin to OE *stoc*
piece, MD & OHG *stock* stick, stump,
trunk of a tree, OHG *stuck* piece, ON
stokkr block of wood, trunk of a tree,
stykki a stick, a staff, a handle, *lêch*
part, piece, Skt *tuṣṭi*, *tuṣṭi* be pushed
basic meaning: to push, strike] 1 a :
stump of a tree b *archaic* : a log or
block of wood c : something held to
resemble a log or stump of wood in
having no life or consciousness; *specif* :
IDOL — usu. used in the phrase *stocks*
and stones (all our fathers worshipped
~s and stones — John Milton) 2 a
: supporting framework or structure : as 1 : the support of
the block in *archaic* : a frame fixed out of the anvil itself b *stocks*
pl the frame or timbers on which a ship's rigging is raised
construction (the old-time wharves in which the masts were built
so many . . . men-o'-war — S-P-B.Mais) (large ships were built
collapse in the ~s — S-F.Mason) c chiefly *slang* : the outer rail
or edge of a bed d : the frame bearing the moving parts of a
spinning wheel e : the casing surrounding and supporting a
lock f : a frame in which an animal (as a horse or cow) may
be slung or otherwise secured esp. for shoeing 3 a : a person
who is dull, stupid, or lifeless like a block of wood (they stock
~s, stupidly listening — Dorothy C. Fisher) 4 *stocks* pl
the frame of the feet and hands of offenders used to confine the
place by way of punishment — compare *pillory* 5 a : the
main stem of a plant : TRUNK b (1) : a living plant 5 a : the
of a plant (as a root) designed or prepared for union with a
scion in grafting and usu. supplying solely or predominantly
underground parts to a graft; also : the portion of a grafted
plant derived from the stock (2) or stock plant : a plant
maintained primarily for the production of slips or cuttings
6 a : the crosspiece of an anchor which can't it so that one of
the flukes may enter the ground — see ANCHOR illustration
b the narrow passage above the anchor 7 a (1) : the
source or line of descent : the original progenitor : the
original (as a man, a race, or a language) from which others
have descended or have been derived (one of . . . many sons
might well become the ~ of a new dynasty — S-A.Frederick)
(2) *obs* : the original source from which something is derived
(the sun, the ~ of light — Thomas Fuller) b (1) : the progenitor
of a family and his direct descendants : the whole group
of descendants of one individual : a line of descent : FAMILY,
LINEAGE (she comes of good ~) (2) : a compound organism
: a colony of individuals (as interconnected zooids)
— compare *colony* c (1) : an infrasppecific group, having unity
of descent (1) a major anthropological division or primary
race of mankind (the main ~s of mankind are usu. held to be
the Caucasoids, Mongoloids, and Negroids) (2) : a race, a
subrace, or group of ethnically closely related people (the
Hamite ~ of northern Africa) d : the living constituents of
a biological group (the ~ of a strain) e (1) : a related group
of languages (2) : a language family 8 *obs* : TRUNK 1b
9 chiefly dial : STOCKING — see NETHERSTOCK, UPPERSTOCK
10 a *obs* : a sum of money set apart for a specific purpose (as
to provide for) b *obs* : capital for investment or
direct use in a business c *archaic* : a distinction from in-
terested (1) *obs* : something constituting an endowment for a son
or a dowry for a daughter d *archaic* : BASIS, GROUNDS — usu.
used in the phrase *upon the stock of* 11 : the block of wood
from which a bell is hung 12 a : the equipment, materials, or
supplies (as of a farm or railroad) (inspectors who report on
the sufficiency of the works and ~s of railways — Homerham
Cox) — see DEAD STOCK, LIVESTOCK, ROLLING STOCK, 3 : LIV-
STOCK 13 a : the wooden part into which the barrel, receiver,
and action of a rifle or shotgun are fitted and by which the
piece is held for firing b *stocks* pl the frame of a plow to
be fitted to the frame of a harness c the part of the grip — compare
slip — the part of the grip connecting arm between the
and shoulder piece in rapid-fire guns d : the long beam of
general rectangular shape which forms the basis of the carriage
body in field-gun carriages being securely fastened to the axle-
tree, forming the connection with the limber in traveling, and
affording the necessary third point of support when the gun is
fired 14 *archaic* a : property that produces income : AS-
SETS b : the aggregate wealth of a nation 15 : a hive of
honeybees 16 : the wooden or iron beam to a plow to which
the handles, share, colter, moldboard and landside are secured
17 (1) the top of a pack of cards not distributed to the
players at the beginning of various games (2) : BONEYARD 3
b *obs* : HAND 16 : the hub of a wheel 19 chiefly Brit : the
capital that a firm employs in the conduct of business (as
trading or investing) 20 a : the part of a tally formerly
given to the creditor in a transaction; *specif* : the part
given in the English exchequer to the person having loaned at the
monarch money on account b (1) : the debt or a share rep-
resented by such a stock or a series of such stocks; *specif* :
the debt or fund due from a government or a private com-
pany or corporation to the lender of money loaned at in-
terest and not divided into shares but instead being divisible
and transferable in any amount desired not involving divisions
smaller than a specified sum — compare CONSOL, MUNICIPAL
SECURITY (2) chiefly Brit : a debt, fund, or capital bearing
interest at a given rate percent in perpetuity and characterized
by the principal not being payable unless at the option of the
debtor c : a specific debt or fund of such character d : a
security representing such a debt or fund
21 : a quantity of something accumulated for future use : a
store or supply to be drawn upon (a ~ of provisions)
store or supply to be drawn upon (a ~ of provisions) — Robertson

[illegible]